DOCUMENT RESUME

ED 374 462 CS 214 541

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TITLE Facilitating Teachers' Professional Growth through Action Research.
PUB DATE 7 Apr 94
NOTE 21p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 4-8, 1994).
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Action Research; *English Teacher Education; Mentors; *Professional Development; Reflective Teaching; Secondary Education; Student Journals; Teacher Alienation; *Teacher Attitudes; *Teacher Evaluation
IDENTIFIERS New Teachers

ABSTRACT

Beginning teachers' experiences in university-based teacher preparation are rapidly replaced by the norms and expectations of the school setting and teachers with whom they work. To interrupt this pattern by which new teachers are pulled from the practices they have learned at the university, teachers must be encouraged to reflect about their teaching through action research, a process by which a teacher studies his or her own actions in the classroom as a means to improve practice. To explore the possibility of collaborative action research--action research done in teams of at least two--a study examined 35 apprentice English teachers and 22 mentor teachers. Data was collected from journals of both apprentices and mentors, and in the form of observation notes by university faculty, self-assessment, and interviews. Each of the studies began with a guiding question generated by the research group and directly related to instruction such as, "Are guided essays more effective than nonguided?" or "Will creative role playing increase comprehension?" Findings showed five recurrent themes concerning teacher attitudes toward data collected: (1) research questions based on attempts to improve teaching; (2) fear about conducting research; (3) adverse to using their students as potential pawns; (4) confusion over qualitative data collection and analysis; and (5) lack of time and commitment to formal reporting of results. Results revealed two major effects on participants substantiated by triangulation of the data: sustained interaction with peers increased, and the level and quantity of reflection on practice increased. (A table lists action research projects.) (TB)

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Facilitating Teachers' Professional Growth Through Action Research @

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Paper Presented at the American Educational Research Association Annual Conference, New Orleans, Louisiana, April 7, 1994

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Facilitating Teachers' Professional Growth Through Action Research

Beginning teachers' experiences in university based teacher preparation are rapidly replaced by the norms and expectations of the school setting and teachers with whom they work. (Fauske & Salman, 1991) Even in the student teaching field experience, university supervisors observe a disconcerting pattern of disregarding university taught strategies (Corcoran, 1981). Though university faculty can be resources for keeping abreast of best practices in the national and international journals, they are often stereotyped as removed form the real work of teaching young people. Best teaching practices, espoused and modelled by effective university faculty (there are a few), get disregarded as well through generalized, anti-university socialization (Fauske & Salman, 1991). How can these patterns be interrupted and redirected to facilitate each beginning teachers' formulation of personal best practices and philosophies?

Encouraging best practice means encouraging reflection about teaching. Schon (1983) refers to reflection in action and reflection on action as an avenue for continuous improvement of instruction. In discussing reflection on practice through action research, McCutcheon and Jung (1990) describe the development of a teacher's personal theory of practice:

> Teachers develop, through their actions, interrelated sets of beliefs and practices about matters such as how students learn, what they should learn, and how motivation occurs. These interrelated beliefs and practices constitute personal theories of practice. (p. 144)

The process of studying their actions in the classroom in order to improve practice is the basis of action research as explored in this study. By studying and reflecting on their own practice, teachers become researchers in the classroom.

Viewing teachers as researchers has been a topic of interest for many years (Corey, 1953, Stenhouse, 1975, Rudduck & Hopkins, 1985, Goswami & Stillman, 1987, Mohr &

Maclean, 1987). Britton (1987) refers to teachers' inquiry in the rich context of the classroom as "the quiet form of research." Further, Patterson and others (1993) have established the importance of classroom teacher as agents of educational change, and substantiated that the teacher as researcher model of change produces more effective teachers. "Educators who learn in their classrooms, who conduct research and write about their observations, become the best possible teachers, thoughtful about how students learn and how they can help. " (Patterson, 1993, p. vii) If action research can produce more effective teachers by encouraging reflection on classroom practices, then should training in action research be included in teacher preparation programs?

To explore that question and the pattern of anti-university socialization, a team of six university faculty rethought the structure of a traditional undergraduate teacher preparation program in secondary English education. Among several changes to the traditional program was shifting the descriptors of participants from student teachers to *apprentice* teachers and from cooperating teachers to *mentor* teachers. Also, university faculty were not referred to as supervisors but simply university faculty. An additional change, basis of the study presented, was adding the requirement that apprentice teachers participate in collaborative action research project to study aspects of their teaching. Mentor teachers participated on a voluntary basis and had the opportunity to earn graduate credit. In this fashion, action research could at once be introduced into the teacher preparation program as well as into the repertoire of the practicing teacher.

Researchers were required to collaborate in teams of at least two. Collaborative action research was most closely aligned to the program goals of reducing the socializing effects of the school n beginning teachers; one such effect is working in isolation. Action research is particularly well suited to collaboration. (Allan & Miller, 1990) Collaborative action research would also hopefully reinforce attempts at facilitating professional growth through sharing both

the research experience and the findings. In summary, the study described here was conducted to assess the nature and impact of collaborative action research on developing and refining teaching practice with the express purpose of validating an alternate model of teacher preparation.

Background

Program Description

Using the rich context of a school site, the alternative preparation program aimed to prepare teachers who rejected the typical mold of isolation and chose to work collaboratively with peers for implementing effective, student centered instruction. The program integrated theory and practice realistically by facilitating exploration, demonstration, and modification of theories and strategies among a critical triad: university faculty, mentor teachers, and apprentice teachers.

The program placed secondary English teachers at selected schools through instruction that is interactive with the school environment and based on real situations and cases. Apprentice teachers move through the program in a cohort group of 20-25 per year that is supported by a team of 5 -6 university faculty teaching collaboratively and 20 mentor teachers working directly with apprentice teachers and demonstrating specific instructional and management strategies. Curriculum of the teacher education and content based strategies is integrated and team taught. Graduate credit in Effective Mentoring, 3 credits, and Action Research, 3 credits, is offered to mentor teachers. Apprentice teachers develop a peer support group for planning and evaluating instruction and also participate in action research during the 20 week field experience. Mentor teachers work with at least two teacher candidates directly over the 20 weeks and demonstrate strategies for the whole cohort.

The program restructured the traditional curriculum so that apprentice teachers became quickly immersed in the school culture. In the second quarter of a four quarter teacher

preparation program, students were placed in two adjacent secondary schools for the entire school day. They observed a cadre of mentor teachers and taught classes in the mornings, and they met content methods based seminars in the afternoon. The program was initiated with four principles in mind: promoting collaboration in developing curriculum and in planning, providing on site instruction based on every day cases, effective mentoring strategies, and facilitating reflection on improving practice. While we achieved those goals in several ways (Butler, et al, 1991), one of the major activities was the promotion of classroom based instructional research projects.

Implementation of action research

As previously stated, the action research initiative in this study is a part of a longitudinal case study aimed at assessing the impact of structural and content changes in the preparation of teachers on the ability of a university based program to break traditional patterns of socialization of beginning teachers. Implementation of this action research initiative began with university faculty asking several guiding questions:

> Will participating in an action research project alter teachers views of practice to more consciously test and revise strategies? Will participation lead to more peer interactions than the norm? Will required action research facilitate shifts socialization phenomena for induction of teachers? Can university studies gain greater impact on the socialization of beginning teachers through implementation of a teacher as researcher dimension to a lengthened teacher preparation field experience?

Though the answers to those questions will be sought beyond the action research initiative, these questions are important for framing the study here.

Further, university faculty specifically designated several purposes for both apprentice and mentor teachers related to the action research projects. The major purposes for supporting

classroom based action research were to help apprentice and mentor teachers:

1. Understand the power of research to inform instruction
2. View their classrooms as a context for implementing a variety of forms and methods of meaningful research
3. Engage in research as a means of continued professional growth and an avenue for maintaining efficacy in teaching.
4. Become continual observers of their students and curriculum
5. Become reflective about their own teaching.

Data Collection

Data was collected from a number of different sources: journals from both mentors and apprentice teachers, observation notes by university faculty, self assessment through open ended survey questions related specifically to action research, open ended interviews and survey data as a part of overall program evaluation, and final report and presentation of action research data. Approximately, 35 apprentice teachers and 22 mentor teachers have participated in action research to date. Six tenure track university faculty and one clinical faculty member participated in the first three years of the project and two additional tenure track faculty have joined the project for 1993-1994.

Journals

Journals have been used extensively in teacher education. Hall and Bowman (1989) have discovered common themes in the journals of apprentice teachers that were matched in other journal keeping projects. Korthagen's (1985) work with apprentice teachers is based on the assumption that while it is not possible to prepare future teachers for every situation they might encounter, it is possible to train them to reflect on their experience of situations as a means of directing their own growth.

Teacher educators often require apprentice teachers to keep reflective journals during

their student teaching experience; however, mentor teachers are not often asked to participate in journal keeping. The reasons are varied but familiar: practicing teachers are volunteers, teachers resist extra unnecessary work, teacher educators can not select practicing teachers who are willing journal keepers, practicing teachers are paid so little how can anything extra be asked of them. Yet, information recorded in journals by mentor teachers surely informs the process of preparing teachers.

Beginning in Fall 1990, both apprentice and mentor teachers involved in school-based teacher preparation of secondary English teachers have been required to keep a journal. The journal was assigned as a means of recording and studying teachers' mentoring strategies as well as their thoughts and attitudes about the program in general and specific events, such as action research. Journals for the apprentice teachers were assigned for similar purposes. Journals also provided a method of feedback to the university faculty allowing them to respond quickly to the needs of both mentor teachers and apprentice teachers. Journal guidelines were not rigid; apprentice and mentor teachers were asked to make journal entries at least once per week over the twenty week program. At the half way point, mentor teachers wrote a longer entry, a "snapshot" in time, assessing the start of the program. They also were required to enter responses during and at the close of the action research projects and a final summary which included overall program evaluations and conclusions.

Journals were treated as dialog journals in the sense that university faculty members responded to specific entries at two point in the and to the journal overall at the end of the quarter. The journals were then copied for data collection purposes and permission secured from teachers for quotation of entries. For further analysis, the university faculty member assigned to support certain mentor teachers also carefully read journals to identify themes and particular references to action research. These findings were compared as well to other data.

Observation Notes

In addition to the data collected in journals, five university faculty were assigned to monitor and support the action research projects. Each of those faculty observed the implementation of the projects in the classroom setting as a part of their regular observation the mentoring process for apprentice teachers. Observation notes were analyzed in two ways: two faculty reviewed the notes to identify consistent themes. Those themes deemed consistent were presented to the remaining four faculty for feedback and modification. Two other faculty reviewed journals to determine consistency of those themes. In addition, the themes and questions identified through this process were compared to journal entries, survey responses and interview data.

Open Ended Survey and Interview Questions

In order to test the themes identified from observation notes and journals, an open ended survey instrument designed specifically to assess the action research component (Appendix B) was developed and distributed to apprentice and mentor teachers. After receiving written feedback from the surveys, small group and individual interviews were conducted to verify information received in written feedback and to gather additional data on the effects of action research on practice. A combination of small group and individual interviews were used because of the difficulty of finding a time to schedule individual interviews only, especially with the mentor teachers. Since the norm of the cohort had been to invite honest feedback through the program, the university faculty decided that this format was reasonable and could provide accurate response data.

In addition to the survey collecting data on action research, an open-ended survey evaluating the overall program was used to collect summative data at the end of the program, including data an the action research projects (Appendix C). A follow up survey (Appendix D)requiring Likert scale responses was sent to participants one year after completing the program. The alternative preparation program is in its fourth year, and the university faculty

researchers are now developing an interview protocol to assess the more long term effects of the action research component. The university faculty plan to have an external interviewer collect the interview data and have applied for grant funds to complete this phase of evaluation.

Final Reports and Presentations

Action research projects were completed by groups of two to six mentors or apprentice teachers. Each group prepared a collective written report of their project according to the outline for field research reports in the course outline (Appendix A). Their successful research was celebrated in a dinner followed by formal presentation of findings by all groups. Those presentations were videotaped.

Procedures

We implemented the classroom based research in two ways. First, we integrated the preservice teachers required senior seminar courses ED 499 into the site based instruction. In ED 499, preservice teachers are required to complete a 30 hour project which can be, but often isn't, an action research project. Most have traditionally chosen a service project in the public schools. Preservice teachers in the experimental program were required to choose the research option. Second, we offered graduate credit to mentor teachers for participating in the action research projects. Both groups attended seminars on conducting classroom-based research with specific discussions on action research and the differences between qualitative and quantitative inquiry, and both groups were required to report their findings to the cohort participants. The courses shared a syllabus which is attached as Appendix A.

Instruction in research methods included data collecting and analysis methods. Emphasis was replaced on qualitative measures due to the nature and goals of the program. Participants were required to read several articles, listed in Appendix A about both qualitative research and classroom-based research. Class sessions were held to discuss the readings, share examples, answer any questions, and to provide step by step support for developing an action research

study, collecting data, analyzing data and reporting conclusions. These initial sessions were focused on framing a research question and identifying various methods for gathering data to answer the question. Although much of the instruction on action research dealt with qualitative methods, several of the research teams chose to pursue quantitative project and to use test scores and grades, as well as survey data, for drawing conclusions.

The course was structured in such a way as to encourage gradual independence from university faculty in the research projects. Course session began as whole group meetings and discussions, moved to research group meetings with designated university faculty supporters, and ended with research groups working independently. At that point, university faculty provided support only upon direct request from the researchers. Group members consulted with one another and with members of other groups for feedback as they proceeded through the projects. The purpose of promoting gradual independence was to reinforce collaboration among teachers as a program goal. At the end of the program, action research participants prepared a collaborative final report for the university faculty and presented their findings to the entire cohort .

Three years in the school based teacher preparation program has produced 21 action research projects. Table 1 outlined the questions guiding the projects and the number of researchers involved, both mentors and students. Also, the chart indicates the kind of study undertaken, experimenting or validating.

As stated earlier, each of the studies began with a guiding question generated by the research group and directly related to instruction. The questions were particularly suited to action research and an emphasis on relating theory to practice.

Table 1
Action Research Projects 1990-1993

Question	Number of participants	Type of study
Are guided essays more effective than nonguided?	4 apprentices	validating
Will creative role playing increase increase comprehension?	1 mentor 1 apprentice	validating
What do students read outside class?	2 mentors, 4 apprentices	validating
How does a regular English class differ from an honors English class?	1 mentor 1 apprentice	validating
How does a students reading level influence coursework outside English?	2 mentors 2 apprentices	validating
What are the effects of using music to teach poetry?	2 apprentices	experimenting
How effective is the anticipatory set in determining the tone of the class?	2 apprentices	validating
Does using computer applications increase reading fluency?	1 mentor 1 apprentice	experimenting
Is a definitional or a contextual approach more effective in teaching vocabulary?	1 mentor 1 apprentice	validating
Is grouping randomly or by learning styles more successful?	1 mentor 1 apprentice	experimenting
Is success in English class linked to parental support?	1 mentor 1 apprentice	validating
How do three different spelling strategies effect student spelling scores?	1 mentor 1 apprentice	experimenting
Will a Read-a-Thon affect attitudes about reading or number of books read?	3 mentors 3 apprentices	experimenting
Will teaching from popular magazines improve attitudes or thinking skills?	1 mentor 1 apprentice	validating
Can students self assess their learning along a predetermined set of traits defining a successful learner?	1 mentor 1 apprentice	validating
What do students and teachers really read?	1 mentor 2 apprentices	validating

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Table 1 (cont.)
Action Research Projects 1990-1993

Question	Number of participants	Type of study
Will integrating whole language strategies into grammar instruction improve writing?	2 apprentices	validating
Is homework effective in stimulating classroom discussion?	1 mentor 1 apprentice	validating
Is home work effective in improving grades?	1 mentor 1 apprentice	validating
What are the effects of collaboratively writing a research paper on the writing process and quality of papers?	1 mentor 1 apprentice	experimenting
What transfer does teaching cultural literacy have between grades 10 and 11?	2 mentors 2 apprentices	validating

Some of the questions have been explored in similar studies previously reported in journals, but teachers chose to revisit the question in their own classrooms. University researchers encountered again the practicing teachers' distrust of university initiated research and resulting theories. Therefore, many of the research questions emerged as studies designed to validate a practice rather than as an experimental study; the kind of study is listed in Table 1. Validating studies, as indicated in Table 1, designate situations in which teachers assessed the effects of a practice that they were using and intuitively believed was effective. Experimenting studies refer to those situations in which teachers tried a new practice. Although many studies were validating, a number of teams pursued "cutting edge" kinds of questions in the application of research to the classroom. The project in which students wrote a research paper (required by the grade 8 core curriculum in that district) was an innovative synthesis of several current studies of teaching writing.

Findings

University researchers identified five major recurrent themes in the data from apprentice and mentor teachers: choice of topics directly related to improvement of practice, fear about conducting research, adversity to using their students as potential pawns, confusion over qualitative and quantitative data collection and analysis, and lack of time and commitment to formal reporting of results. These themes largely reflected stereotypical views of research and lack of personal experience in conducting research.

Without fail, research questions were based on attempts to refine or improve teaching practice. Perhaps this occurred in part because the assignment of deciding on research topics was framed as choosing a question one has had about effectiveness of teaching strategies. The extent of a synergistic effect of the cohort approach on determining research questions as well as the effects of the assignment parameters were not specifically identified in any of the data as contributing factors in the choice of research questions. However, each question formulated

emerged from a thoughtful review of either plaguing problems with student outcomes or uncertainty about the effectiveness of a particular practice or choice of content. Some teachers commented, "I had recently taken a cooperative learning inservice class and I was anxious to try it," and "I saw that [teaching] reading seemed to be a weak area in the student teachers." Clearly, these mentor and apprentice teachers were focused on improvement of practice.

Although identification of one or more compelling research questions was relatively easy for the teachers, defining that question in terms of a research project was more difficult. Teachers were skeptical about the research project because of the time commitment and the general "mystery" of the whole process. Excerpts from one mentor teacher's journal exemplified a general attitude, " I thought [research] was a highly technical and complicated process -- conducted only in the laboratory." Some teachers were intimidated by the prospect of engaging in research because they felt that their questions and concerns about teaching practice were mundane or insignificant. Perhaps this attitude is a manifestation of the isolation of teaching and the idea that teachers' concerns about practice are specific to their own classrooms, not generalizable to others. One apprentice teacher said, somewhat tongue in cheek, when asked if she wished to publish her findings, " ... we couldn't possibly be interested in anything important enough to publish." Other evidence of teachers fear of research was manifest in a vaguely defensive posture regarding the relative roles of university versus public school faculty. Several journal entries reflected a prevailing stereotype that research activities are reserved for the "ivory tower university types" and they, as practitioners, should "on principle" stick with practice. (To what principle she referred was never determined). One teacher who chose not to participate in an research project cited her belief that "real research would take too much time, and was too involved." In summary, the perceived process research process did not feel natural to the teachers although many of them routinely employed a basic research techniques of observing and assessing student behaviors with consequent

revision teaching practice to improve student outcomes.

Several of the teachers expressed adversity to using their students as potential pawns. Their conception of research as a laboratory exercise carried over to concerns about employing comparative strategies. Teachers stated in a group discussion during the selection of topics that they could not in good conscience knowingly try strategies which they suspected to be more effective in one class while intentionally employing a potentially less effective strategy in another class. Teachers inherently felt that they should give students the best they had to offer. This became an issue of values and possibly points to a prime deterrent to their participation in certain types of research activities. Therefore, most of the research projects were designed to validate a practice in which teachers already believed rather than to experiment. When asked if they studied a process that they already felt was relatively successful in the classroom, 83% replied yes. Some sample yes responses are (1) "Yes--We all supported cooperative learning before we began. We just wanted to push the limits," and (2) "Yes, but I wanted stats."

Just as the teachers reflected confusion over research regarding the use of their own students as "guinea pigs," they also confused quantitative and qualitative methods of data collection and analysis. Although university faculty framed the research project as qualitative and carefully selected readings and examples to guide the design of the projects, teachers persistently were drawn into quantitative data collection and analysis. Teachers were accustomed to reading statistical analyses and probabilities in reports of educational studies. They were intrigued by qualitative methods but were often skeptical of the findings. They discounted the findings of qualitative research and themselves as qualitative researchers as simply a process of making intuitive predictions that they constantly did as a teacher. Again, a reluctance to view themselves as legitimate researchers surfaced. In addition, they initially viewed gathering data qualitatively as easier and less rigorous that in a quantitative study. They soon discovered that such preconceptions were false as supported by comments by over one half

of the teachers concerning the considerable time required in such research.

Conclusions

There were two major effects on participants substantiated by triangulation of the data: (1) sustained interaction with peers increased and (2) the level and quantity of reflection on practice increased. Sustained interaction with peers is best explained using Allan and Miller's (1990) three stage model for professional development through action research. The stages outlined, *directive, cooperative, and collaborative*, were based on a study of action research projects in a graduate course for practicing teachers. The first stage describes the opening sessions of a graduate course in which the instructors are *directive* about the parameters of research projects. During this stage in both studies, students explored topics, reviewed data collection methods, and received definitions of action research and the teacher as researcher. Student interaction in this stage is mostly directed by outside sources or persons.

As the group began to build positive interdependence (p. 198), a second stage of interaction emerged, *cooperation.* In the Allan and Miller study, the class worked on individual research projects and came together in class sessions to compare data collection strategies and to prepare for presenting their work to one another. In the study at hand, teachers had two levels of cooperative experience regarding data collection and report preparation. They interacted daily with their project co-researchers in small groups and weekly with the entire cohort in class sessions. The number and length of interactive sessions initiated by collaboration on research were measurably greater.

In the final stage, *collaboration*, a pattern of collaboration emerged especially in preparing to present findings. Allan and Miller (1990) describe teacher interaction at in this stage:

> They were no longer conducting their investigations just to improve their own teaching and their students' learning; now they must publicly

> present their results. As they turned to the cooperative group for support, they asked one another what an unknown teacher would need to know about their classroom action research. (p. 200)

A similar pattern emerged in the study at hand with one complicating factor. Several apprentice teacher journal entries reflected some resentment at the degree to which the mentor teacher had relinquished responsibility for a shared reporting effort in favor of the apprentice teacher(s) alone presenting the results. This occurrence is not surprising given the previously stated feelings of mentor teachers that research of this nature was peculiar to their own classrooms and the value of sharing results with other teachers was minimal. Several teachers commented that they would not likely participate in reporting of results if course credit had not been offered.

The mentor teachers lack of willingness to share and, more importantly, their failure to see the importance of sharing results are troubling outcomes of the study. Three hypotheses can be generated to explain this outcome: (1) the differential status of apprentice and mentor teachers tended to reinforce the notion of delegation of the reporting function to the subordinate, (2) other studies of the effects of action research on professional development have been conducted in the context of a graduate course which students selected rather than as a part of mentoring activities in which graduate credit was optional, and, (3) though teachers may intrinsically rewarded by improving practice through action research, little reward for sharing ideas with others teachers

Although difficulties arose, the impact of the collaborative model should not be underestimated in this study. The decision to require at least two participants in every research project, besides being congruent with program goals, seemed to strengthen both the forma and substance of the action research. One university faculty observed a mentor and apprentice research team and wrote in her notes, "They have transcended the boundaries of

student and teacher. They are truly working as a team for the benefit of their students, collaborating in the best sense on their project and their teaching. How do we measure that kind of interaction in these action research projects?"

The second major effect of action research was increased levels of reflection. Evidence of reflection abounds in teachers' journals. Evidence supporting the levels of reflection are best explained by Sparks-Langer (1990) analysis yielding seven levels of reflection in preservice teachers' journals. The following framework, Table 2, is taken from Short and Rinehart's (1993, p. 508) application of the levels to preparation of school leaders:

Table 2

Framework and Examples of Reflective Thinking

1 No descriptive language	No description
2 Simple, layperson descriptions	"She used groups"
3 Events labeled with appropriate terms	"She used cooperative groups."
4 Explanations with tradition or personal preference given as rationale	"We always use reading groups."
5 Explanation with principle or theory	"Interdependence in group work helps others learn."
6 Explanation with principle or theory and consideration of context	"In this class, student social groups are formed along economic lines."
7 Explanation with consideration of ethical, moral, and political issues	"Cooperative learning is being used used here because there is a split along economic lines in this community and we want student to accept and value each other in spite of these differences."

Almost all of the journals showed steady movement toward higher levels of reflection. Only five journals, all from mentor teachers were determined to have made little change in

level of reflection. There was little real reflection in the beginning and little in the end; these teachers resisted writing journals and essentially refused to self disclose in this manner. In interviews, it became clear that the issues causing apparent lack of higher level reflection were related to time constraints and resulting fear of becoming too immersed in the process. This fear could be translated into an argument for teacher "think" time in developing their strategies, but that argument goes beyond the scope of this study.

Summary

The power of action research to redefine the work of teachers has been debated, and the extent of impact ranges from estimates of minor improvements to suggestions of major changes in the way teachers think about practice. (Rogers, et al., 1990) Hodgkinson (1957) wrote early in the debate, "Perhaps it would be better to describe action research as quantified common sense rather than a form of scientific, empirical research...research is not place for an amateur." (in Patterson, 1993, p. 15)

Fortunately, educators have moved beyond the notion that all research is empirical and conducted for the sake of expanding knowledge alone. Action research has been more widely accepted as a meaningful form of inquiry in the classroom context:

> The criteria of rational discourse, authentic enlightenment, and commitment to free and wise decision making, (by which the self critical processes of action research are judged...) could well be taken as an educational credo. Research is needed to establish whether and when group decision making processes on action research live up to this promise, and how the conditions can be created for further progress toward achieving the promise of performance. (Grundy & Kemmis, 1982)

Still there continues to be some skepticism about the classification of action research as true research. But the arguments against action research were further eroded most recently

by a redefinition of scholarship in Boyer's *Scholarship Reconsidered* (1990). Boyer's classifications of scholarship provide impetus to a community of inquiry that is inclusive of teachers and teaching rather than exclusive:

> Surely, scholarship means engaging in original research. But the work of the scholar also means stepping back from one's investigation, looking for connections, building bridges between theory and practice, and communicating one's knowledge effectively to students...the work of professoriate might be thought of as having four separate but overlapping functions. These are: the scholarship of *discovery*; the scholarship of *integration*; the scholarship of *application*; and the scholarship of *teaching*. (p. 16)

Boyer focuses on the university and university faculty, but the scholarship of application and teaching deemed valuable to university faculty should be carried out in every day K-12 classrooms as well. Scholarship and inquiry is also essential for the continued efficacy of K-12 teachers. As one manifestation of these kinds of scholarship, action research, with all its potential shortcomings, continues to hold promise as a route to nurturing teachers' development of effective practices and refinement of a personal rationale for instructional decision making (Noffke, 1990).

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